

STATISTICAL NOTE ON CROP-CUTTING EXPERIMENTS ON PADDY

IN WYMPESINGH 1939-40.

General Form of the Tables.

1. The serial number given in column (0.1) is for use for reference in the Statistical Laboratory. The next column (0.2) gives the J.L.No; column (0.5) the name of Thana, Union or Mousa; and column (0.4) the serial number of samples which are actually harvested in the case of Mausam.
2. The main results are given in the three columns (1), (2), and (3) for ek-fasali, do-fasali and all-fasali respectively. Columns (1.1), (2.1) and (3.1) give the number of half-samples (each consisting of four sub-samples or cuts), and columns (1.2) and (3.2) the number of cuts actually harvested. The mean yield of paddy together with a range on either side equal to the standard error (i.e. the standard deviation) of the mean is given in maunds per acre in columns (1.3), (2.3) and (3.3) respectively.
3. It will be noticed that instead of probable errors I have used the standard error of the mean as this is more usual in current statistics. In terms of probability this implies that odds are 2 to 1 that the true mean lies within the given range. The tolerance range can if desired, be easily increased to the 5 per cent level by using twice the standard error, that is, by doubling the given range on either side. In this case the odds will be only 1 in 20 against the true mean lying within the range.
4. Two index numbers are given in the last two columns. Column (5.1) shows the do-fasali yield as a percentage of the ek-fasali; and column (5.2) the dry weight of paddy as a percentage of the green weight. It has not been possible to complete the work for dry weight for all the thanas at the time of writing this Note. Results for one thana (Nalitabari) are being sent herewith, the results for all the four thanas will follow in the course of a few days. I may note however that the dry weight percentage is very steady; and may be taken as 57 per cent without any appreciable risk of error.

5. The form is practically the same as the one sent by Mr. Bastin with his covering letter of the 1st March 1940. For convenience of statistical work we have given the number of samples and cuts instead of the area out; the latter information can be easily obtained by multiplying the number of cuts by a constant multiplier 27.04 sq. feet (neglecting very slight variations due to the whole of a cut not being under paddy). For economy of space we have omitted the total outturn of green paddy as this also can be easily obtained from the ~~number~~ number of cuts and the mean yield per acre. It will be seen, therefore, that the information given here is practically the same as in Mr. Bastin's form.

#### Thanas and Union Summaries

6. Tables (1) and (2) give a summary of the information in a condensed form for the Thanas and Unions respectively. Supplementary information regarding "percentages of total cuts" are also given in these cases. It will be noticed that a great deal of paddy had been harvested before the field work was started; and the actual number of half-samples (each consisting of four cuts) collated was 4340 which was only about 16 per cent of the total number laid out in the maps. As the paddy on 36 per cent of other samples had been already harvested it will be seen that 54 per cent of the total samples were under paddy; 14 per cent were under other crops; 31 per cent were uncultivated while no records were available for about 1 per cent of samples.

7. The over-all mean yield for all five thanas was  $23.2 \pm 0.2$  maunds per acre for ek-fasali,  $15.5 \pm 0.4$  maunds per acre for do-fasali, and  $22.2 \pm 0.2$  maunds per acre for all-fasali. These appear to be quite reasonable estimates for the season. The variation between Thanas were not large but were statistically significant in some cases. Thus for ek-fasali Jalitabari had the highest mean yield ( $25.2 \pm 0.3$  maunds per acre); Durgapur ( $22.9 \pm 0.2$ ), Haluaghat ( $22.6 \pm 0.3$ ), and Kalmakanda ( $21.8 \pm 0.5$ ) formed a middle group with roughly the same yield; and Sribardi came last with  $20.6 \pm 0.5$  maunds per acre. The differences between Unions were also statistically significant in many cases showing the existence of local differences in yield.

8. The information for each Mauza (classified under Unions) is given in Table 3. Besides the usual information we are also giving certain adjusted values of the mean yield in maunds per acre in the case of mauzas in columns (4.1) and (4.2) for ek-fasali and all-fasali respectively. These adjusted mean values were obtained in the following way. The observed mean yields together with the corresponding ranges in terms of standard deviations (which are given in ~~other~~ columns (1.3) and (3.3) were plotted on  $\sigma_n$  theta maps. Smooth lines of equal yield (at intervals of three maunds per acre on either side of 23) were then drawn by inspection. These lines of equal yield together with the yields in surrounding mauzas were carefully scrutinised, and adjusted values (lying within the adopted tolerance range) were written down as reasonable estimates for the mauzas. The procedure is certainly subject to some extent; but doubtful cases were considered by two or three statistical workers independently, and the final values were adjusted after discussion with me. These adjusted values may be of some use in actual work of assessment especially in the case of mauzas in which no samples are available. It is scarcely necessary for me to emphasize that the adjusted values must be used with great caution and discretion as they are not based on actual observations, but on what is at best a reasonable graduation of the available material.

9. In some mauzas it has not been possible however to give any adjusted values as there was no basis for making any estimates. In such cases the mean yield of the Union will supply some information.

10. I should like to add a few words of caution from the statistical point of view. Owing to early harvesting only about 16 per cent of the total samples could be collected while paddy was actually grown on about 54 per cent of total samples. This means that we succeeded in obtaining less than 30 per cent of ~~the possible samples~~ possible samples. This has appreciably reduced the number of samples available for individual mauzas; and has consequently increased the margin of error. This has also meant that a large number of mauzas were left complete blanks which is even more serious than the reduction in the size of the sample in individual mauzas.

11. Another important point is the question of seasonal fluctuations. From a study of the frequency distribution I am of opinion that the present estimate for each theta as a whole may be considered to be reasonably accurate for the 1939-40 season. We have, however, no information how far these estimates are representative of different seasons; from a statistical point of view it is therefore risky to accept the mean yields in one season as the standard basis for assessment.

Statistical Report on the Crop-cutting Experiments on the  
Paddy in Mysnasingh : 1939-40.

Section 1. Introduction, Yield of Green Paddy and study of Variance.

Introduction

A Crop-cutting experiment on Aman paddy only was carried out in 1939-40 in the Mysnasingh District under the general direction and supervision of Mr. Bastin, Settlement Officer, Mysnasingh. The main object of the experiment was to determine the average yield per acre of Aman Paddy for purpose of assessment of land revenue. The preliminary report on the yield of paddy by mauzas, unions, and thanas, was submitted on the 6th May 1940. Supplementary information relating to the yield of straw, and various statistical constants relating to paddy are given here. These will be of great help in preparing plans for future surveys of this type.

2. The statistical plan for the scheme was prepared in the Statistical Laboratory. The area surveyed comprised five Thanas (Durgapur, Haluaghat, <sup>A</sup>almakanda, Kalitabari, and Shribardi) covering 837 square miles. It was divided into 14 halkas, approximately of 60 square miles, each under a Kamungo. Each Kamungo had 6 amins working under his supervision, so that each amin was required to complete the crop-cutting work in ten square miles in the season. A Senior Revenue Officer, stationed at P.S. Kalitabari, supervised the field work of the 7 ~~mark~~ eastern halkas Nos. 5, 6, 7, 8, 9, 10, 11; and another Senior Revenue Officer, stationed at Durgapur, supervised the work of the 7 western halkas Nos. 1, 2, 3, 4, 12, 13, 14. The forms and schedules for field work as also instructions of investigators were supplied from the Statistical Laboratory, Calcutta.

3. It was decided to take 16 samples per square mile to leave a margin for unforeseen wastage. Each sample consisted of two half-samples, each having 4 cuts (each of area 25.04 sq.ft.) situated on opposite corners of a square. The samples were located at random in the Statistical Laboratory, and their position marked on the 16 mauza maps, which were then supplied to the halkas - Kamungos.

4. Many of the samples fell on uncultivated land, tanks, homesteads, etc., or on land not growing paddy or growing paddy or growing unripe paddy; and a great deal of paddy had been harvested before the actual commencement of the field work. In most cases it was found that of the two half-samples constituting a sample, only one could be collected. The actual number of half-samples (each consisting of our tuts) gathered was 4340 which was approximately 16 per cent of the total number laid out in the maps. As paddy on 38 per cent of other samples had been already harvested, it will be seen that 54 per cent of the total number of samples were actually under paddy, although we could obtain only less than 30 per cent of the possible samples on account of the delay in starting the field work. Of the rest, 14 per cent were under other crops, 31 per cent were uncultivated while no records were available for about 1 per cent of the samples.

5. The paddy from each cut of a half-sample was threshed separately and the weights of green paddy and straw were entered in the field book. One of the cuts in a half-sample was reserved for dry weighing of paddy and straw. Besides the jurisdiction List Number of the village and the Revenue Number of the plot from which the sample was collected, the following entries were recorded in the field book:-

- (1) Class of land
- (2) Nature of cultivation
- (3) Date of taking green weight
- (4) Date of taking dry weight
- (5) Name of variety of paddy
- (6) Green weight of paddy
- (7) Green weight of straw
- (8) Dry weight of paddy
- (9) Dry weight of straw
- (10) Weight of Chitta
- (11) Area under unripe paddy
- (12) Area under paddy already harvested
- (13) Area under nutan patit
- (14) Area under other crops
- (15) Area of other lands
- (16) Area under Ail

Records were also kept as to the class of land i.e. ek-fasali (single-cropped) or do-fasali (double-cropped); there were only four instances of tin-fasali (triple-cropped) land which were neglected in the analysis. Detailed instructions were also given to each kammgo to inspect the work of each amin under him at least on alternate days, and the Senior Revenue Officers were required to make surprise inspection of the work of kammgos.

#### Yield of Green Paddy

6. The detailed results for the yield of green paddy were shown in Table 1 which was sent with a Preliminary Report on the 6th May, 1940. The mean yield of green paddy for all the thanas taken together was found to be  $23.2 \pm 0.2$  maunds per acre for ek-fasali,  $15.5 \pm 0.4$  maunds per acre for do-fasali, and  $22.2 \pm 0.2$  maunds per acre for all-fasali. The variations in mean yields between Police Stations were not large, although statistically significant in some cases. The percentage of dry wet weight to green weight was found to be very steady, being roughly 87 percent on an average for the five Thanas.

7. The observed mean yields in individual mauzas for ek-fasali and all-fasali were plotted on thana maps, and iso-yield contours (lines of equal yield) were drawn at intervals of three maunds per acre. With the help of these contour lines adjusted figures were obtained for individual mauzas for ek-fasali and do-fasali crops. In the case of certain mauzas, however, it was not possible to give even these adjusted values for lack of samples in adjoining areas. The important question of seasonal fluctuation could not be considered and it would be hazardous to accept those estimates of the mean yields in one season as the standard yields.

#### Study of Variance : Weight of Green Paddy.

8. As mentioned above, the survey was carried out in five Police stations, viz. Durgapur, Haluaghat, Kalmakanda, Malitabary and Sribardi. For convenience of reference, we give below in Table (1.1) the number of unions, mauzas, half-samples and cuts collected in each of these police stations.

Table (1.1). Number of Half-samples and Cuts by Police Stations.

Police Stations	Unions	Mouzas	Half Samples	Cuts
Durgapur	11*	142	815	3090
Halnaghat	14	143	1187	4531
Kalmakanda	8	84	319	1174
Nalitabari	19	160	1200	4670
Sribardi	11	85	819	3126
	68	614	4340	16,591

9. The variation in yield can conveniently be studied by the analysis of variance for the weight of "green paddy" "between Thanas", "between Unions", "within Unions between Mauzas (J.L.'s)", and "within J.L.'s between half-samples". These similar results for each Thana separately are shown in Table (1.2). Variations "between Unions" and "within Unions between J.L.'s" are significant. The variations "between Thanas", "within Thanas between Unions", and "within Unions between J.L.'s" shown in Table (1.2) are also significant. This definitely established the existence of heterogeneity in the material.

10. We next proceed ~~xxx~~ to estimate the "basic" variances "between Unions" and "between J.L.'s" for each of the Police Stations. This is a case of three-fold nested sampling. Let  $V_1$  be the observed variance "with J.L.'s between Samples",  $V_2$  the observed variance "within Unions between J.L.'s" and  $V_3$  the observed variance "between Unions", values for which are given in Table (1.2). Further, let  $S^2_1$ ,  $S^2_2$  and  $S^2_3$  be the estimates of the basic variance "between half samples between Mauzas" and "between Unions" respectively; and let 't' be the number of Unions,  $n_i$  the number of J.L.s within the i-th Union, and  $m_{ij}$  the number of samples within the j-th mauzas in the i-th union, so that

$$\text{Total number of Mauzas} = \sum_i n_i = n \quad \dots \quad (1)$$

$$\text{Union} \quad \dots \quad (2)$$

$$\text{Total number of samples in the } i\text{-th Union} = \sum_j m_{ij} = m_i \quad \dots \quad (3)$$

$$\text{Total number of samples} = \sum_i \sum_j m_{ij} = m \quad \dots \quad (4)$$

$$V_1 = \sigma^2 \quad \dots \quad (4)$$

$$V_2 = \frac{m - \sum_i \frac{\sum_j m_{ij}^2}{m_i}}{n - t} \quad S^2_2 + S^2_1 \quad \dots \quad (5)$$

$$V_3 = \frac{m - \sum_i \frac{m_i^2}{n}}{t - 1} \quad S^2_3 + \frac{\sum_i \frac{m_i^2}{n} - \frac{\sum_j \sum_i m_{ij}^2}{m}}{t - 1} \quad S^2_2 + S^2_1 \quad \dots \quad (6)$$

11. Employing the above formulae it is easy to calculate the actual values of  $S_1$ ,  $S_2$  and  $S_3$  in the different cases. We have also obtained the values of  $S_4$  the standard deviation corresponding to the total variance. For convenience of comparison, we have reduced the mean yields and standard deviations to maunds per acre in every case. The results are presented in Table (1.3), where col. (1) gives the name of the Police Station, and col.(2) the mean yield of green paddy in maunds per acre, cols. (3), (5), (7) and (9) give the degrees of freedom for variation "between Unions" ( $f_1$ ) "within Unions between J.L.'s" ( $f_2$ ), "within J.L.'s between Half-samples" ( $f_3$ ) and total variation ( $f_4$ ); whilst cols. (4), (6), (8) and (10) respectively give the corresponding standard deviations, and cols. (11), (12), (13) and (14) respectively the corresponding co-efficients of variation  $C_1$ ,  $C_2$ ,  $C_3$  and  $C_4$ .

12. The mean yield of Police Stations is quite steady, being of the order of 22 maunds per acre, except in Sribardi where it is low, and roughly 18 maunds per acre. The effect of this low yields noticeable in the co-efficients of variation for this Thana which are high in all cases. For the other Police Stations, the coefficient of variation "between Unions" fluctuates from 5.41 per cent in Nalitabari to 20.56 per cent in Kalmakanda and 21.47 per cent in Sribardi. This indicates that the Unions in Nalitabari and Durgapur were comparatively homogeneous but the Unions in the other three Police Stations, were definitely ~~huxx~~ heterogeneous. The coefficient of variation "between J.L.'s" varies from about 14 per cent in Durgapur to nearly 25 per cent in Sribardi. The coefficient of variation "with J.L.'s between Half.samples" is quite steady being roughly of the order of 30 per cent in all Thanas except in Sribardi. Where it is 46 per cent. Finally, the total coefficient of variation also is very steady and about 39 per cent ; except in Sribardi where it is again as high as 56 per cent.

13. Examining the results within a Police Station it appears that the coefficient of variation progressively increases from "between unions" to "within Unions between J.L.'s", "within J.L.'s between Half-samples", and 'total variation". This is exactly what we expect because the smaller the number of samples ~~huxx~~ the larger



inevitably will be the corresponding variance, and in the present case because the means are roughly of the same order, also the corresponding coefficients of variation.

14. We may discuss on similar lines the results of analysis of variance for all five Thanas taken together. This provides an example of a four-fold nested sampling. We use the same notation as before, denoting the observed variance "within J.L.'s between half-samples," "within Unions between J.L.'s", "within Thanas between Unions" and "between Thanas by  $V_1, V_2, V_3, V_4$  respectively, and the estimates of the corresponding basic variances by  $s_1^2, s_2^2, s_3^2$  and  $s_4^2$  respectively. Further, let 't' be the number of Police Stations,  $n_i$  the number of Unions in the i-th Police Stations,  $m_{ij}$  the number of mauzas in the j-th Union of the i-th Police Station, and  $P_{ijk}$  the number of half-samples in the k-th mauza of the j-th Unions of the i-th Police Station.

*Then clearly,*  
 Total number of Half-samples =  $\sum_i \sum_j \sum_k p_{ijk} = p$  . . . . . (7)

Number of Half-samples in i-th Thana =  $\sum_j \sum_k p_{ijk} = p_i$  . . . . . (8)

Number of Half-samples in the j-th Union in the i-th Thana =  $\sum_k p_{ijk} = p_{ij}$  . . . . . (9)

Total number of mauzas =  $\sum_i \sum_j m_{ij} = m$  . . . . . (10)

Total number of mauzas in the i-th Thana =  $\sum_j m_{ij} = m_i$  . . . . . (11)

Total number of Unions =  $\sum_i m_i = n$  . . . . . (12)

We have the following expressions :-  
 $V_1 = s_1^2$  . . . . . (13)

$V_2 = \frac{p - \sum_i \sum_j \frac{p_{ij}^2}{p_i}}{m - n} s_2^2 + s_1^2$  . . . . . (14)

$V_3 = \frac{p - \sum_i \frac{\sum_j p_{ij}^2}{p_i}}{n - t} s_3^2 + \frac{\sum_i \sum_j \frac{p_{ij}^2}{p_i} - \sum_i \sum_k \frac{p_{ik}^2}{p_i}}{n - t} s_2^2 + s_1^2$  . . . . . (15)

$V_4 = \frac{p - \sum_i \frac{p_i^2}{p}}{t - 1} s_4^2 + \frac{\sum_i \sum_j \frac{p_{ij}^2}{p_i} - \sum_i \sum_j \frac{p_{ij}^2}{p}}{t - 1} s_3^2 + \frac{\sum_i \sum_k \frac{p_{ik}^2}{p_i} - \sum_i \sum_k \frac{p_{ik}^2}{p}}{t - 1} s_2^2 + s_1^2$  . . . . . (16)

15. The calculated values of  $S_1$ ,  $S_2$ ,  $S_3$  and  $S_4$  together with the value of  $S_5$ , the ~~total~~ standard deviation corresponding to total variance, in maunds per acre shown in Table (1.4) where col.(1) gives the mean yield, cols. (2), (4), (6), (8) and (10) the degrees of freedom ~~total~~ "between Thanas", "within Thanas between Unions", "within Unions between J.L.'s", "within J.L.'s between Half-samples" and "Total variation" respectively; and cols. (3), (5), (7), (9) and (11) the estimates of the corresponding basic standard deviations. Finally cols. (12), (13), (14), (15) and (16) give the corresponding coefficients of variation symbolised by  $C_1$ ,  $C_2$ ,  $C_3$ ,  $C_4$  and  $C_5$  respectively, which come out to be roughly 11 per cent, 14 per cent, 20 per cent, 34 per cent and 42 per cent respectively.

#### Section 2. Varietal Difference.

16. The results have been analysed separately for the five important varieties of paddy, viz., Chapalani, Gaita, Chapali, Askal and Dhepa. Mean values and standard deviation with corresponding standard errors in maunds per acre for yield of green paddy for each Police Station separately and for all five Police Stations combined are presented in Tables (2.1), (2.6) ; for dry paddy in Tables (2.7) - (2.12) ; for green straw in Tables (2.13) - (2.18) ; for dry straw in Tables (2.19) - (2.24) ; and for chitta in Tables (2.25) - (2.30). All the tables are of precisely the same form, col. (1) giving the name of varieties, col. (2) the number of cuts, col. (3) the mean values with standard errors, col.(4) the standard deviations with standard errors and col.(5) the coefficients of variation with standard errors. Besides the results for individual varieties, these for the five varieties taken together for all varieties (only for dry cuts), and all cuts have also been recorded in each of the above tables. The coefficients of correlation between (i) green paddy and dry paddy, (ii) green paddy and green straw, (iii) dry paddy and dry straw and (iv) dry paddy and chitta are given in Tables (2.31), (2.32), (2.33) and (2.34) respectively. All these tables are of the same form, col.(1) giving the name of varieties ; cols. (2.1), (3.1), (4.1), (5.1), (6.1) and (7.1) the number of dry cuts for Durgapur, Halnaghat, Kalmakanda, Nalitabari, Sribaridi and all Thanas respectively; and, finally, cols. (2.2), (3.2), (4.2), (5.2), (6.2) and (7.2) the values of the corresponding correlation coefficients.

In all the tables, values of the correlation coefficients not significant at the 5% level of probability have been enclosed within brackets.

17. The mean yield of green paddy is quite steady and of the order of 23 maunds per acre in the different Thanas except in Sribardi where it is 18 maunds per acre. On the whole "Chapalani" is a low-yielding variety with about 18 maunds per acre; Chapalani and Dhepa are medium-yielding varieties with roughly 22 maunds per acre; and Gaita and Askal are high-yielding varieties with about 26 maunds per acre. The results are very similar for the yield of dry paddy.

18. The mean yield of green straw is very low in Sribardi, being about 30 maunds per acre; and low in Halitabari, being 44 maunds per acre, the over-all average being 56 maunds per acre. In the other Police Stations, the yield is roughly of the order of 65 maunds per acre. As for the varieties, Chapali and Dhepa are low-yielding, with about 39 maunds per acre; Chapali is medium yielding with 51 maunds per acre; while Askal and Gaita are high-yielding, with yields of 63 and 75 maunds per acre respectively. The results for dry straw, naturally, are on the whole similar.

19. As for the mean yield of Chitta, the variation from Police Station to Police Station is not particularly marked. Chapalani and Chapali give low yields with about 0.76 maunds per acre; Dhepa gives medium yield with about 0.93 maunds per acre; and, finally, Askal and Gaita give high yields with about 1.12 maunds per acre. On the whole, therefore, taking into consideration all the five indices of yields, it would appear that Chapalani, Chapali and Dhepa are low or medium-yielding varieties, while Askal and Gaita are high-yielding, the latter definitely coming out as the best.

#### Coefficients of Variation.

20. As regards coefficients of variation it is obvious that low yields would result in high coefficients of variation and vice versa. For green and dry paddy we find that the over-all coefficients of variations are of roughly the same order, viz., 42 per cent. The coefficients of variation for individual varieties fluctuates considerably owing mainly to differences in mean yield. For green paddy it varies from 34 per cent for Gaita to 48 per cent for Dhepa; and for dry paddy from 35 per cent for Gaita to 53 per cent for Dhepa. The coefficients of variation for green straw and dry straw, are roughly of the same order, 67 per cent for all varieties taken together. For individual varieties the coefficient varies from 49 per cent for both dry and green straw; for Gaita to 80 per cent for Dhepa.

### Coefficients of Correlation

21. The coefficients of correlation between the weights of green paddy and dry paddy are all highly significant, and of the same order in different police stations or for different varieties, being roughly + 0.94. It is, therefore, scarcely necessary to record the weights of both green and dry paddy.

22. The coefficients of correlation between the weights of green paddy and green straw are not as high as in the previous case, although all are significant except that for the variety Gaita in P.S. Nalitabari. The value of the coefficient for the pooled material is 0.58. Variation in the value of the correlation coefficients from variety to variety is noticeable, that for Chapali and Askal over all thanas being roughly + 0.45 for Dhepa + 0.56, and for Gaita and Chapalani + 0.62 and + 0.68 respectively.

23. The coefficients of correlation between dry paddy and dry straw are roughly of the same order as those between green paddy and green straw, and all are significant except that for variety Gaita in P.S. Nalitabari. The actual value for the whole material is + 0.56. As before, the different varieties are sufficiently marked. The value for Chapali and Askal over all thanas is roughly 0.45, for Dhepa 0.57 and for Gaita and Chapalani 0.53 and 0.71 respectively. The correlations between dry paddy and chitta is 0.43 for the pooled material; and there is only one non-significant value, viz., that for variety Gaita in P.S. Nalitabari for which only a very small number of cuts were available.

### Section 3. Frequency Distribution and percentage Frequencies for weight of Green paddy.

24. Frequency distributions were prepared of the number of (a) cuts, (b) half-samples, and (c) mauzas means falling within the class intervals of 0-5, 5-10, 10-15, ..... 55-60 maunds per acre for the weight of green paddy for each Police Stations well as for all five police stations combined for ek-fasali, do-fasali and all-fasali crops. From these frequency distributions corresponding percentages were calculated. The frequency distribution for ek-fasali, do-fasali and all-fasali respectively for each Police Station separately and five Police Stations combined are presented in Tables (3.1), (3.3) and (3.5), and the corresponding percentage frequencies in Tables (3.2), (3.4), and (3.6). All the tables are of the same form, col. (1) giving the class-interval, cols. (2.1), (2.2) and (2.3)

the frequency distributions or percentage frequencies by cuts, half-samples and mauza means respectively for P.S. Durgapur; cols. (3.1), (3.2) and (3.3) the frequency distributions or percentage frequencies by cuts, half-samples and mauza means for P.S. Haluaghat. In the same way cols.(4.1) (4.2) and (4.3) give the results for Kalamakanda; cols. (5.1), (5.2) and (5.3) for Malitabari; cols.(6.1), (6.2) and (6.3) for Sribardi; and finally, cols.(7.1), (7.2), and (7.3) for all thanas taken together. In Table (3.2), there are additional columns (2.4), (3.4), (4.4), (5.4), (6.4) and (7.4) showing the percentage frequencies derived from the iso-yield fertility contours. As some of the computations could not be completed, cols.(2.1), (3.1), (4.1), (5.1), (6.1) and (7.1) have been omitted in Tables (3.1), (3.2), (3.3) and (3.4).

25. It will be seen that percentage frequencies for cuts and half-samples are almost in complete agreement but are quite different from those for mauza means.

26. An attempt was made to calculate the proportion of land in each class by the method of two-yield contours. The observed mean yields in maunds per acre for mauzas along with a range equal to twice standard error with the mean as centro, were plotted on a themap. Smooth contour lines at intervals of 5 maunds per acre were then drawn on the maps; and in the case of mauzas for which samples were not available adjusted figures of yield were adopted on the basis of the contour lines. Then area between any two consecutive contour lines was measured by means of a planimeter; and all areas in a given class-interval were added to give the total area in square miles in each class interval. These were then converted into percentages. Unfortunately, owing to large gaps in the primary data the drawing of contour lines was to some extent liable to subjective errors which gave rise to considerable discrepancies between results obtained by different workers. It was, consequently, not considered profitable to carry on with this work beyond that for the ek-fasali yields, for which the mean results for each Police Station separately and all Police Stations combined have been given for purposes of comparison.

#### Green weight of Straw.

27. We have analysed the yield of straw in exactly the same manner as the green weight of paddy, the results for which have already been submitted. As before, the serial number of col.(0.1) is intended for use in the Statistical

Laboratory, Col. (0.2) gives the P.S.No., Union No. or J.L.No.; col.(0.3) the name of Police Station Union or Mauza; and col.(0.4) the serial number of samples ~~which~~ cut in the case of table 4.1, and the serial number of ~~which~~ samples which are actually harvested in the case of Table 4.3 cols.(1), (2) and (3) give the mean results for ek-fasali, do-fasali and all-fasali respectively. In cols. (1.1), (2.1) and (3.1) are given the number of half-samples (each consisting of four cuts), and in cols.(1.2), (2.2) and (3.2) the number of cuts actually harvested. The mean yield of green straw together with a range on ~~each~~ either side equal to the standard error of the mean is given in maunds per acre in cols.(1.3), (2.3) and (3.3) respectively.

28. Finally, cols.(5.1) and (5.2) give the percentage of do-fasali to the ek-fasali yield, and the percentage of the dry weight of straw to its green weight respectively. It is of some interest to note that with the exception of P.S.Sribardi the percentage ratio of do-fasali to ek-fasali yield is roughly 60. Also the percentage of dry weight of straw to green weight varies from 50 in the case of P.S. Sribardi to 64 in the case of P.S. Kalmakanda, neglecting P.S. Durgapur for which the percentage attains the unusually high figure of 87.

29. Tables 4.3 give the information for each individual mauza classified union by union within each Thana.

30. Tables 4.1 and 4.2 give a summary of the information in a condensed form for the Police Stations and Unions respectively. The additional information regarding "Percentages of total cuts" has already been supplied with the results of analysis of green paddy.

31. The general mean yield for ~~the~~ all the five police stations was found to be  $56.3 \pm 1.0$  maunds per acre for ek-fasali,  $31.1 \pm 1.5$  maunds per acre for do-fasali, and  $52.9 \pm 1.0$  for all-fasali. It appears that there are fairly reasonable estimates for the season. For the police stations individually, the variation in the mean yield for ek-fasali was found to be considerable Sribardi giving mean yield of  $37.7 \pm 1.9$  maunds per acre, Malitabari  $47.5 \pm 1.1$  maunds per acre, Durgapur  $59.1 \pm 1.3$  maunds per acre and Haluaghat  $67.3 \pm 1.1$  maunds per acre. For do-fasali however, the variations between mean yields for police stations to police station, the lowest mean yield being Police stations were small and statistically negligible. For all-fasali, the mean yields were again very variable from police station to police station, the lowest mean yield being  $34.1 \pm 1.3$  maunds per acre for Sribardi and the highest  $66.1 \pm 1.1$  for Haluaghat.

Table (1.2) : Analysis of Variance : Weight of green Paddy (in mds.per acre)

Source of Variation	D.F.	Sum of squares	Mean sq.	Estimate of basic variance
(1)	(2)	(3)	(4)	(5)
<u>P.S. - Durgapur</u>				
Between Unions	10	3760.54	376.05	3.0490
Within Unions (between J.L.S.)	151	15795.93	120.58	10.9373
Within J.L.S. (bet. Half-samples)	673	41281.54	61.34	61.3400
<b>Total (bet. Half-samples)</b>	<b>814</b>	<b>60858.01</b>	<b>74.74</b>	
<u>P.S. - Haluaghat</u>				
Between Unions	13	20575.61	1582.74	14.9000
Within Unions (between J.L.S.)	129	24711.72	191.56	19.4900
Within J.L.S. (bet. Half-samples)	1044	45581.81	43.66	43.6600
<b>Total (bet. Half-samples)</b>	<b>1186</b>	<b>90869.14</b>	<b>76.62</b>	
<u>P.S. Kalamakanda</u>				
Between Unions	7	5876.48	839.50	20.1000
Within Unions (Between J.L.S.)	76	10095.18	132.83	26.6895
Within J.L.S. (bet. Half-samples)	235	8404.40	35.76	35.7600
<b>Total (bet. Half-samples)</b>	<b>318</b>	<b>24376.06</b>	<b>76.65</b>	
<u>P.S. Nalitabari</u>				
Between Unions	18	9561.24	531.18	1.7710
Within Unions (between J.L.S.)	141	30216.68	214.30	23.5232
Within J.L.S. (bet. Half-samples)	1040	65047.57	62.55	62.5500
<b>Total (bet. Half-samples)</b>	<b>1199</b>	<b>104825.49</b>	<b>87.43</b>	
<u>P.S. - Sribardi</u>				
Between Unions	10	14775.68	1477.56	14.6097
Within Unions (between J.L.S.)	74	16966.18	229.27	19.2846
Within J.L.S. (bet. Half-samples)	734	49359.46	67.25	67.2500
<b>Total (bet. Half-samples)</b>	<b>818</b>	<b>81101.27</b>	<b>99.15</b>	
<u>All Thanas</u>				
Between Thanas	4	23196.85	5799.21	5.4875
Within Thanas (between unions)	58	54549.50	940.51	9.4255
Within Unions (bet. J.L.S.)	551	97785.69	177.47	19.1018
Within J.L.S. (bet. Half-samples)	3728	209674.78	56.27	56.2700
<b>Total (bet. Half-samples)</b>	<b>4359</b>	<b>385206.82</b>	<b>88.78</b>	

Table (1.3) : Estimates of Basic Standard Deviations and Coefficients of Variability.

Police Station	Mean yield	Between unions		(Within unions) between J.L.S.		(Within J.L.S.) Bet. Half-samp.		Total variation		Coefficient of variation			
		F <sub>1</sub>	S.D.	F <sub>2</sub>	S.D.	F <sub>3</sub>	S.D.	F <sub>4</sub>	S.D.	C <sub>1</sub>	C <sub>2</sub>	C <sub>3</sub>	C <sub>4</sub>
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Durgapur	22.9	10	1.75	131	3.31	673	7.83	814	8.64	7.62	14.44	34.20	37.73
Halughat	22.5	13	3.86	129	4.42	1044	6.61	1186	8.75	17.31	19.80	29.63	39.23
Kalukanda	21.8	7	4.48	76	5.17	335	5.98	318	8.76	20.56	23.70	27.43	40.18
Kalitabari	24.6	18	1.33	141	4.86	1040	7.91	1199	9.35	5.41	19.72	32.15	38.01
Sribardi	17.8	10	3.82	74	4.39	734	8.20	818	9.96	21.47	24.67	46.07	55.96

Table (1.4) : Estimates of basic standard deviations and coefficients of variability ; All Thanas.

Mean yield	Between Thanas	(Within Thanas) between union		(Within J.L.S.) bet.H.sample		Total variation		Coefficient of variation							
		F <sub>1</sub>	S.D.	F <sub>2</sub>	S.D.	F <sub>3</sub>	S.D.	F <sub>4</sub>	S.D.	C <sub>1</sub>	C <sub>2</sub>	C <sub>3</sub>	C <sub>4</sub>	C <sub>5</sub>	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
22.2	4	2.34	68	3.07	551	4.37	3726	7.50	4339	9.43	10.55	13.83	19.69	3379	42.48



## Crop-cutting Experiments in Hymensingh, 1939-40.

Table (2.1) Table of Mean, S.D. and C.V. for varieties.

P.S. Durgapur

Green paddy.

Variety	N	Mean $\pm$ S.P.	Mean $\pm$ S.E.	Mean $\pm$ S.P.	
(1)	(2)	(3)	(4)	(5)	
Chapalani	61	57	18.74 $\pm$ 0.98	7.38 $\pm$ 0.69	39.38 $\pm$ 4.22
Gaita	91	219	26.16 $\pm$ 0.59	8.69 $\pm$ 0.42	35.21 $\pm$ 1.76
Chapali	62	45	19.70 $\pm$ 1.32	8.83 $\pm$ 0.93	44.83 $\pm$ 5.80
Askal	15	56	22.97 $\pm$ 1.09	8.12 $\pm$ 0.77	35.34 $\pm$ 3.73
Dhepa	77	-	-	-	-
Five varieties	377		23.79 $\pm$ 0.46	8.94 $\pm$ 0.33	37.56 $\pm$ 1.55
All varieties	798		23.56 $\pm$ 0.33	9.21 $\pm$ 0.23	39.00 $\pm$ 1.11
All outs	815		22.74 $\pm$ 0.31	8.80 $\pm$ 0.22	38.69 $\pm$ 1.09

Table (2.2) : Table of Mean, S.D. and C.V. for varieties

P.S. Haluaghat

Green paddy.

Chapalani	61	266	21.12 $\pm$ 0.56	9.06 $\pm$ 0.40	42.87 $\pm$ 2.17
Gaita	91	84	24.75 $\pm$ 0.99	9.10 $\pm$ 0.70	36.77 $\pm$ 3.20
Chapali	62	88	23.04 $\pm$ 0.92	8.64 $\pm$ 0.65	37.49 $\pm$ 3.20
Askal	15	99	25.94 $\pm$ 1.04	10.34 $\pm$ 0.74	39.87 $\pm$ 3.25
Dhepa	77	-	-	-	-
Five varieties	537		22.90 $\pm$ 0.41	9.42 $\pm$ 0.29	41.17 $\pm$ 1.45
All varieties	1163		22.56 $\pm$ 0.28	9.58 $\pm$ 0.20	42.00 $\pm$ 1.01
All outs	1187		22.12 $\pm$ 0.25	8.70 $\pm$ 0.18	39.32 $\pm$ 0.92

Table (2.3) : Table of mean, S.D. and C.V. for varieties.

P.S. Kalmakanda

Green paddy.

Chapalani	61	27	15.77 $\pm$ 1.72	8.97 $\pm$ 1.22	56.85 $\pm$ 9.93
Gaita	91	67	25.24 $\pm$ 1.12	9.13 $\pm$ 0.79	36.17 $\pm$ 3.51
Chapali	62	-	-	-	-
Askal	15	58	25.78 $\pm$ 1.35	10.26 $\pm$ 0.95	39.80 $\pm$ 4.24
Dhepa	77	-	-	-	-
Five varieties	152		23.76 $\pm$ 0.83	10.20 $\pm$ 0.59	42.89 $\pm$ 2.88
All varieties	309		22.45 $\pm$ 0.55	9.61 $\pm$ 0.39	43.00 $\pm$ 2.02
All outs	319		21.30 $\pm$ 0.49	8.68 $\pm$ 0.35	40.73 $\pm$ 1.86

Table (2.4) : Table of Mean, S.D. and C.V. for varieties.

P.S. Nalitabari

Green paddy.

Chapalani	61	144	22.00 $\pm$ 0.71	8.58 $\pm$ 0.50	38.97 $\pm$ 2.62
Gaita	91	8	29.12 $\pm$ 2.10	5.94 $\pm$ 1.48	20.39 $\pm$ 5.31
Chapali	62	154	24.94 $\pm$ 0.74	9.15 $\pm$ 0.52	36.68 $\pm$ 2.35
Askal	15	103	26.14 $\pm$ 0.99	10.00 $\pm$ 0.70	38.26 $\pm$ 3.03
Dhepa	77	25	26.25 $\pm$ 2.26	11.28 $\pm$ 1.60	42.95 $\pm$ 7.11
Five varieties	434		24.40 $\pm$ 0.45	9.40 $\pm$ 0.32	38.52 $\pm$ 1.49
All varieties	1192		25.25 $\pm$ 0.28	9.63 $\pm$ 0.20	39.00 $\pm$ 0.81
All outs	1200		24.44 $\pm$ 0.28	9.10 $\pm$ 0.18	37.23 $\pm$ 0.86

**Crop-cutting Experiments in Mymensingh, 1939-40.**

**Table (2.5): Table of Mean, S.D. and C.V. for varieties.**

Variety	N.	Mean $\pm$ S.E.	S.D. $\pm$ S.E.	C.V. $\pm$ S.E.
(1)	(2)	(3)	(4)	(5)
<u>P.S. Sribardi</u>				<u>Green paddy.</u>
Chapalani	61	-	-	-
Gaita	91	-	-	-
Chapali	62	15.78 $\pm$ 0.94	8.48 $\pm$ 0.66	53.72 $\pm$ 5.27
Askal	15	-	-	-
Dhepa	77	19.64 $\pm$ 0.82	9.44 $\pm$ 0.58	48.08 $\pm$ 3.58
Five varieties	214	18.16 $\pm$ 0.63	9.26 $\pm$ 0.45	50.96 $\pm$ 3.04
All varieties	815	18.55 $\pm$ 0.36	10.32 $\pm$ 0.25	56.00 $\pm$ 1.77
All outs	819	17.69 $\pm$ 0.34	9.78 $\pm$ 0.24	55.25 $\pm$ 1.73
<u>All Thanas</u>				<u>Green paddy.</u>

**Table (2.6) : Table of Mean, S.D. and C.V. for varieties.**

Chapalani	61	494	18.56 $\pm$ 0.40	8.84 $\pm$ 0.28	42.47 $\pm$ 1.58
Gaita	91	378	26.24 $\pm$ 0.45	8.82 $\pm$ 0.32	33.59 $\pm$ 1.35
Chapali	62	369	21.82 $\pm$ 0.50	9.52 $\pm$ 0.35	43.66 $\pm$ 1.89
Askal	15	316	25.44 $\pm$ 0.56	9.88 $\pm$ 0.40	38.81 $\pm$ 1.76
Dhepa	77	157	20.69 $\pm$ 0.80	10.02 $\pm$ 0.57	48.40 $\pm$ 3.31
Five varieties	1714		22.96 $\pm$ 0.23	9.54 $\pm$ 0.16	41.57 $\pm$ 0.82
All varieties	4277		22.72 $\pm$ 0.15	9.99 $\pm$ 0.11	44.00 $\pm$ 0.79
All outs	4340		21.98 $\pm$ 0.14	9.38 $\pm$ 0.10	42.65 $\pm$ 0.76

**Table (2.7) : Table of Mean, S.D. and C.V. for varieties.**

<u>P.S. Durgapur</u>					<u>Dry paddy</u>
Chapalani	61	57	16.02 $\pm$ 0.85	6.43 $\pm$ 0.60	40.14 $\pm$ 4.32
Gaita	91	219	22.94 $\pm$ 0.54	7.96 $\pm$ 0.38	34.68 $\pm$ 1.85
Chapali	62	45	17.25 $\pm$ 1.14	7.68 $\pm$ 0.81	44.55 $\pm$ 5.55
Askal	15	56	18.68 $\pm$ 0.98	7.30 $\pm$ 0.69	39.11 $\pm$ 4.22
Dhepa	77	-	-	-	-
Five varieties	377		20.58 $\pm$ 0.42	8.11 $\pm$ 0.30	39.41 $\pm$ 1.64
All varieties	798		20.43 $\pm$ 0.29	8.28 $\pm$ 0.21	41.00 $\pm$ 1.19

**Table (2.8) : Table of Mean, S.D. and C.V. for varieties.**

<u>P.S. Hалуqahat</u>					<u>Dry paddy.</u>
Chapalani	61	266	19.06 $\pm$ 0.52	8.53 $\pm$ 0.37	44.76 $\pm$ 2.30
Gaita	91	84	21.36 $\pm$ 0.82	7.49 $\pm$ 0.58	35.07 $\pm$ 3.02
Chapali	62	88	19.90 $\pm$ 0.78	7.35 $\pm$ 0.55	36.93 $\pm$ 3.14
Askal	15	99	21.80 $\pm$ 0.84	8.36 $\pm$ 0.59	38.38 $\pm$ 3.10
Dhepa	77	-	-	-	-
Five varieties	537		20.06 $\pm$ 0.35	8.22 $\pm$ 0.25	40.98 $\pm$ 1.57
All varieties	1163		19.69 $\pm$ 0.24	8.43 $\pm$ 0.17	43.00 $\pm$ 1.04

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Table (2.9): Table of Mean, S.D. and C.V. for varieties.

Variety	N	Mean $\pm$ S.D.	S.D. $\pm$ S.E.	C.V. $\pm$ S.P.
(1)	(2)	(3)	(4)	(5)
P.S. Kalmakunda				
Dry paddy.				
Chapalani 61	27	13.73 $\pm$ 1.41	7.31 $\pm$ 1.00	53.24 $\pm$ 9.07
Gaita 91	67	22.10 $\pm$ 1.03	8.44 $\pm$ 0.73	38.17 $\pm$ 3.75
Chapali 62	-	-	-	-
Askal 15	58	23.37 $\pm$ 1.23	9.37 $\pm$ 0.87	40.09 $\pm$ 4.28
Dhepa 77	-	-	-	-
Five Varieties	152	21.10 $\pm$ 0.75	9.25 $\pm$ 0.53	43.84 $\pm$ 2.96
All Varieties	309	19.92 $\pm$ 0.50	8.75 $\pm$ 0.35	44.00 $\pm$ 2.08

Table (2.10): Table of Mean, S.D. and C.V. for varieties.

P.S. Walitabari				
Dry paddy				
Chapalani 61	144	19.20 $\pm$ 0.64	7.69 $\pm$ 0.45	40.06 $\pm$ 2.71
Gaita 91	8	26.00 $\pm$ 1.83	8.18 $\pm$ 1.29	19.90 $\pm$ 4.45
Chapali 62	154	22.09 $\pm$ 0.69	8.56 $\pm$ 0.49	38.77 $\pm$ 2.52
Askal 15	103	22.25 $\pm$ 0.86	8.69 $\pm$ 0.61	39.06 $\pm$ 3.11
Dhepa 77	25	22.45 $\pm$ 2.17	10.85 $\pm$ 1.53	48.33 $\pm$ 8.28
Five Varieties	434	21.26 $\pm$ 0.41	8.33 $\pm$ 0.29	40.08 $\pm$ 1.56
All Varieties	1192	22.18 $\pm$ 0.26	9.05 $\pm$ 0.18	41.00 $\pm$ 0.97

Table (2.11): Table of Mean, S.D. and C.V. for Varieties

P.S. Sribardi				
Dry Paddy				
Chapalani 61	-	-	-	-
Gaita 91	-	-	-	-
Chapali 62	82	13.35 $\pm$ 0.38	7.94 $\pm$ 0.62	59.44 $\pm$ 6.06
Askal 15	-	-	-	-
Dhepa 77	132	16.87 $\pm$ 0.77	8.86 $\pm$ 0.54	52.52 $\pm$ 4.03
Five Varieties	214	15.52 $\pm$ 0.59	8.67 $\pm$ 0.42	55.86 $\pm$ 3.44
All Varieties	315	15.63 $\pm$ 0.33	9.29 $\pm$ 0.23	59.00 $\pm$ 1.90

Table (2.12): Table of Mean, S.D. and C.V. for Varieties.

All Thanas				
Dry paddy				
Chapalani 61	494	16.20 $\pm$ 0.37	8.12 $\pm$ 0.26	50.13 $\pm$ 1.96
Gaita 91	378	22.50 $\pm$ 0.41	7.91 $\pm$ 0.29	35.16 $\pm$ 1.43
Chapali 62	309	19.04 $\pm$ 0.45	8.71 $\pm$ 0.32	45.75 $\pm$ 2.01
Askal 15	316	21.68 $\pm$ 0.48	8.58 $\pm$ 0.34	39.60 $\pm$ 1.81
Dhepa 77	157	17.76 $\pm$ 0.75	9.38 $\pm$ 0.53	52.84 $\pm$ 3.72
Five Varieties	1714	20.00 $\pm$ 0.21	8.60 $\pm$ 0.15	42.96 $\pm$ 0.86
All Varieties	4277	19.76 $\pm$ 0.14	9.05 $\pm$ 0.10	46.00 $\pm$ 0.84

Table (2.13): Table of Mean, S.D. and C.V. of Green straw by Varieties.

P.S. Durgapur				
Chapalani 61	57	39.52 $\pm$ 3.58	25.50 $\pm$ 2.39	64.52 $\pm$ 8.18
Gaita 91	219	72.50 $\pm$ 2.54	37.54 $\pm$ 1.80	51.78 $\pm$ 3.07
Chapali 62	45	52.50 $\pm$ 4.17	27.96 $\pm$ 2.95	53.26 $\pm$ 7.03
Askal 15	56	68.57 $\pm$ 5.74	42.96 $\pm$ 4.06	62.65 $\pm$ 7.31
Dhepa 77	-	-	-	-
Five Varieties	377	63.42 $\pm$ 1.94	37.74 $\pm$ 1.37	59.50 $\pm$ 2.83
All Varieties	798	58.64 $\pm$ 1.35	38.24 $\pm$ 0.95	65.00 $\pm$ 2.21
All Cutg	815	58.25 $\pm$ 1.38	37.38 $\pm$ 0.98	64.17 $\pm$ 2.15

Tables of Mean, S.D. and C.V. of Green Straw by Varieties

(1)	(2)	(3)	(4)	(5)
Tablo (2.14)		P.S. Hалуаghat		
Chapalani 61	266	53.22 ± 2.10	34.20 ± 1.48	58.75 ± 3.31
Gaita 91	84	82.98 ± 3.04	36.15 ± 2.79	43.57 ± 5.95
Chapali 62	83	59.09 ± 3.74	35.05 ± 2.64	59.32 ± 5.84
Askal 15	99	68.06 ± 3.93	39.45 ± 2.80	57.97 ± 5.33
Dhepa 77	-	-	-	-
Five Varieties	537	64.14 ± 1.58	36.66 ± 1.12	57.15 ± 2.24
All Varieties	1163	67.25 ± 1.21	41.40 ± 0.86	62.00 ± 1.71
All Cuts	1187	67.00 ± 1.15	39.50 ± 0.81	58.96 ± 1.57

Table (2.15)		P.S. Kalmakanda		
Chapalani 61	27	35.45 ± 5.81	30.20 ± 4.11	35.17 ± 18.14
Gaita 91	67	74.89 ± 4.02	32.94 ± 2.84	43.96 ± 4.47
Chapali 62	-	-	-	-
Askal 15	58	74.57 ± 5.40	41.15 ± 3.82	55.20 ± 6.50
Dhepa 77	-	-	-	-
Five Varieties	152	67.76 ± 3.14	38.70 ± 2.20	57.11 ± 4.21
All Varieties	309	59.56 ± 2.37	41.58 ± 1.68	70.00 ± 3.96
All Cuts	319	58.49 ± 2.21	39.50 ± 1.56	67.53 ± 3.70

Tablo (2.16)		P.S. Halitabari		
Chapalani 61	144	46.39 ± 2.19	26.25 ± 1.55	56.59 ± 4.27
Gaita 91	8	75.00 ± 16.67	47.15 ± 11.79	62.86 ± 21.03
Chapali 62	154	29.26 ± 1.56	19.35 ± 1.10	68.14 ± 5.16
Askal 15	103	55.08 ± 3.11	31.80 ± 2.20	59.55 ± 5.42
Dhepa 77	25	73.30 ± 8.91	44.55 ± 6.30	60.78 ± 11.34
Five Varieties	434	45.98 ± 1.45	30.12 ± 1.03	68.49 ± 3.24
All Varieties	1192	45.82 ± 1.00	34.44 ± 0.71	75.00 ± 2.24
All Cuts	1200	45.85 ± 0.99	34.13 ± 0.70	74.44 ± 2.21

Table (2.17)		P.S. Sribardi		
Chapalani 61	-	-	-	-
Gaita 91	-	-	-	-
Chapali 62	82	25.18 ± 1.65	14.91 ± 1.17	59.21 ± 6.03
Askal 15	-	-	-	-
Dhepa 77	132	32.96 ± 2.15	24.65 ± 1.52	75.51 ± 6.66
Five Varieties	214	29.98 ± 1.49	21.74 ± 1.05	72.53 ± 5.02
All Varieties	815	33.53 ± 0.85	24.16 ± 0.60	72.00 ± 2.54
All Cuts	819	33.18 ± 0.80	23.01 ± 0.57	69.35 ± 2.40

Table (2.18)		All Thanas		
Chapalani 61	494	51.36 ± 1.43	31.84 ± 1.01	61.99 ± 2.62
Gaita 91	378	75.50 ± 1.89	36.80 ± 1.34	48.87 ± 2.16
Chapali 62	369	38.30 ± 1.46	28.10 ± 1.03	73.37 ± 3.89
Askal 15	316	63.13 ± 2.18	38.76 ± 1.64	61.40 ± 3.24
Dhepa 77	1157	39.38 ± 2.57	32.16 ± 1.82	81.67 ± 5.32
Five Varieties	1714	54.90 ± 0.88	36.30 ± 0.62	66.11 ± 1.55
All Varieties	4277	52.69 ± 0.58	38.14 ± 0.41	72.00 ± 1.57
All Cuts	4340	52.49 ± 0.56	37.13 ± 0.40	70.74 ± 1.52

(Table (2.19)): Tables of Mean, S.D. and C.V. of Dry Straw by Varieties.

		P.S. Durgapur		
Chapalani 61	57	20.70 ± 1.72	12.95 ± 1.22	62.56 ± 7.82
Gaita 91	219	37.07 ± 1.29	19.02 ± 0.91	51.31 ± 3.02
Chapali 62	45	28.34 ± 2.41	16.16 ± 1.70	57.05 ± 7.73
Askal 15	56	33.75 ± 3.01	22.50 ± 2.13	68.87 ± 8.66
Dhepa 77	-	-	-	-
Five Varieties	377	38.06 ± 1.00	19.36 ± 0.71	58.88 ± 2.77
All Varieties	798	31.23 ± 0.75	20.52 ± 0.52	66.00 ± 2.25

Tables of Mean, S.D. and C.V. of ~~Stomach~~ Dry Straw by Varieties.

	(1)	(2)	(3)	(4)	(5)			
<b>Table (2.19)</b>								
<b>P.S. Durgapur</b>								
Chapalani	61	57	20.70	1.72	12.95	1.22	62.56	7.82
Gaita	91	219	37.07	1.29	19.02	0.91	51.31	3.02
Chapali	62	45	20.34	2.41	16.16	1.70	57.05	7.73
Askal	15	56	33.75	3.01	22.50	2.13	66.67	8.76
Dhepa	77	-	-	-	-	-	-	-
Five Varieties		377	33.05	1.00	19.36	0.71	59.56	2.77
All Varieties		798	31.25	0.75	20.52	0.52	65.00	2.26
<b>Table (2.20)</b>								
<b>P.S. Balurghat</b>								
Chapalani	61	266	29.66 ± 1.04	16.95 ± 0.74	57.15 ± 3.19			
Gaita	91	84	48.93 ± 2.40	22.59 ± 1.74	46.17 ± 4.25			
Chapali	62	88	38.12 ± 2.63	24.65 ± 1.86	64.66 ± 6.60			
Askal	15	99	38.08 ± 2.21	21.94 ± 1.56	57.62 ± 5.28			
Dhepa	77	-	-	-	-			
Five Varieties		537	35.62 ± 0.92	21.32 ± 0.65	59.85 ± 2.59			
All Varieties		1163	35.94 ± 0.65	22.01 ± 0.46	61.00 ± 1.67			
<b>Table (2.21)</b>								
<b>P.S. Kalmakanda</b>								
Chapalani	61	27	22.22 ± 3.88	20.15 ± 2.74	90.68 ± 20.07			
Gaita	91	67	47.61 ± 2.59	21.18 ± 1.83	44.50 ± 4.54			
Chapali	62	-	-	-	-			
Askal	15	58	46.90 ± 3.48	26.48 ± 2.46	56.35 ± 6.69			
Dhepa	77	-	-	-	-			
Five Varieties		152	42.86 ± 2.02	24.96 ± 1.43	58.25 ± 4.33			
All Varieties		309	35.97 ± 1.47	25.84 ± 1.04	72.00 ± 4.13			
<b>Table (2.22)</b>								
<b>P.S. Nalitabari</b>								
Chapalani	61	144	26.18 ± 1.14	13.70 ± 0.81	52.33 ± 3.83			
Gaita	91	8	42.50 ± 8.38	23.70 ± 5.33	55.76 ± 16.88			
Chapali	62	154	16.98 ± 1.03	12.75 ± 0.73	75.09 ± 6.24			
Askal	15	103	24.71 ± 1.16	11.80 ± 0.82	47.75 ± 4.01			
Dhepa	77	125	42.20 ± 4.57	22.85 ± 3.23	54.15 ± 9.65			
Five Varieties		434	23.79 ± 0.74	15.34 ± 0.52	64.46 ± 2.96			
All Varieties		1192	26.50 ± 0.59	20.45 ± 0.42	77.00 ± 2.33			
<b>Table (2.23)</b>								
<b>P.S. Sribardi</b>								
Chapalani	61	-	-	-	-			
Gaita	91	-	-	-	-			
Chapali	62	82	12.38 ± 0.83	7.54 ± 0.59	60.95 ± 6.28			
Askal	15	-	-	-	-			
Dhepa	77	132	16.14 ± 0.91	10.40 ± 0.64	64.46 ± 5.37			
Five Varieties		214	14.70 ± 0.65	9.56 ± 0.45	65.06 ± 4.27			
All Varieties		815	16.40 ± 0.39	11.16 ± 0.28	68.00 ± 2.34			
<b>Table (2.24)</b>								
<b>All Thanas</b>								
Chapalani	61	494	27.20 ± 0.72	16.10 ± 0.51	59.18 ± 2.46			
Gaita	91	378	41.68 ± 1.08	21.00 ± 0.76	50.38 ± 2.25			
Chapali	62	369	22.38 ± 0.98	18.80 ± 0.69	83.98 ± 4.80			
Askal	15	316	34.89 ± 1.23	21.78 ± 0.87	62.97 ± 3.55			
Dhepa	77	157	20.28 ± 1.29	16.22 ± 0.91	79.94 ± 6.81			
Five Varieties		1714	30.09 ± 0.49	20.42 ± 0.35	67.85 ± 1.61			
All Varieties		4277	26.71 ± 0.52	21.16 ± 0.23	74.00 ± 1.64			

	(1)	(2)	(3)	(4)	(5)
<b>Table (2.25)</b>					
<b>P.S. Durgapur</b>					
Chapalani	61	57	0.74 ± 0.06	0.46 ± 0.04	61.90 ± 7.59
Gaita	91	219	1.20 ± 0.05	0.68 ± 0.04	56.49 ± 3.45
Chapali	62	45	0.94 ± 0.09	0.58 ± 0.06	60.85 ± 8.46
Askal	15	56	1.16 ± 0.11	0.82 ± 0.08	71.12 ± 0.53
Dhepa	77	-	-	-	-
Five varieties	377	-	1.09 ± 0.04	0.68 ± 0.03	62.59 ± 3.03
All varieties	798	-	1.06 ± 0.02	0.69 ± 0.01	66.00 ± 2.26

	(1)	(2)	(3)	(4)	(5)
<b>Table (2.26)</b>					
<b>P.S. Haluaghat</b>					
Chapalani	61	286	0.79 ± 0.03	0.53 ± 0.02	67.09 ± 4.01
Gaita	91	84	0.82 ± 0.06	0.59 ± 0.04	71.52 ± 7.85
Chapali	62	88	0.72 ± 0.04	0.36 ± 0.03	48.97 ± 6.14
Askal	15	99	1.06 ± 0.06	0.56 ± 0.04	52.61 ± 4.66
Dhepa	77	-	-	-	-
Five varieties	537	-	0.84 ± 0.02	0.53 ± 0.01	63.47 ± 3.80
All varieties	1163	-	0.85 ± 0.02	0.56 ± 0.01	66.00 ± 1.87

	(1)	(2)	(3)	(4)	(5)
<b>Table (2.27)</b>					
<b>P.S. Kalmakanda</b>					
Chapalani	61	27	0.00 ± 0.13	0.66 ± 0.09	82.59 ± 17.22
Gaita	91	67	1.33 ± 0.08	0.69 ± 0.06	51.88 ± 5.56
Chapali	62	-	-	-	-
Askal	15	58	1.20 ± 0.11	0.81 ± 0.08	67.22 ± 8.61
Dhepa	77	-	-	-	-
Five varieties	152	-	1.19 ± 0.06	0.75 ± 0.04	63.09 ± 4.85
All varieties	309	-	1.13 ± 0.04	0.72 ± 0.03	64.00 ± 3.47

	(1)	(2)	(3)	(4)	(5)
<b>Table (2.28)</b>					
<b>P.S. Halitabari</b>					
Chapalani	61	144	0.82 ± 0.04	0.51 ± 0.03	62.58 ± 4.92
Gaita	91	8	1.44 ± 0.26	0.73 ± 0.18	50.69 ± 15.59
Chapali	62	154	0.79 ± 0.03	0.42 ± 0.02	53.80 ± 3.85
Askal	15	103	1.08 ± 0.06	0.64 ± 0.04	59.53 ± 5.42
Dhepa	77	25	0.92 ± 0.11	0.54 ± 0.08	58.15 ± 10.65
Five varieties	434	-	0.88 ± 0.03	0.54 ± 0.02	61.02 ± 2.74
All varieties	1192	-	0.96 ± 0.02	0.64 ± 0.01	67.00 ± 1.89

	(1)	(2)	(3)	(4)	(5)
<b>Table (2.29)</b>					
<b>P.S. Sribardi</b>					
Chapalani	61	-	-	-	-
Gaita	91	-	-	-	-
Chapali	62	82	0.66 ± 0.06	0.52 ± 0.04	77.44 ± 8.97
Askal	15	-	-	-	-
Dhepa	77	152	0.93 ± 0.05	0.61 ± 0.04	65.59 ± 8.70
Five varieties	214	-	0.83 ± 0.04	0.59 ± 0.03	71.08 ± 4.87
All varieties	815	-	0.90 ± 0.02	0.68 ± 0.01	76.00 ± 2.76

	(1)	(2)	(3)	(4)	(5)
<b>Table (2.30)</b>					
<b>All Thanas</b>					
Chapalani	61	494	0.79 ± 0.02	0.52 ± 0.01	65.85 ± 2.86
Gaita	91	370	1.14 ± 0.03	0.68 ± 0.02	59.59 ± 2.82
Chapali	62	369	0.76 ± 0.02	0.46 ± 0.01	59.48 ± 2.86
Askal	15	316	1.11 ± 0.04	0.68 ± 0.03	61.71 ± 3.28
Dhepa	77	157	0.83 ± 0.05	0.60 ± 0.04	63.98 ± 4.87
Five varieties	1714	-	0.94 ± 0.01	0.61 ± 0.01	65.24 ± 1.52
All varieties	4277	-	0.95 ± 0.01	0.65 ± 0.01	68.00 ± 1.44

Table (2.31): Table of Correlation Coefficients between Green paddy and dry paddy

Variety	Durgapur		Halughat		Kamalabanda		Halticabari		Sribardi		All Thanas	
	H	F	H	F	H	F	H	F	H	F	H	F
(1)	(2.1)	(2.2)	(3.1)	(3.2)	(4.1)	(4.2)	(5.1)	(5.2)	(6.1)	(6.2)	(7.1)	(7.2)
Chapaladi	61	0.9047	2.66	0.9574	27	0.9584	144	0.9059	-	-	494	0.9596
Gaita	61	0.9522	84	.9519	67	.9597	8	.9001	-	-	378	.9522
Chapali	62	.9567	88	.9435	-	-	164	.9524	82	.9552	369	.9578
Akai	15	.8874	99	.9870	58	.9667	103	.9114	-	-	316	.9251
Dhepa	77	-	-	-	-	-	25	.9727	132	.9603	157	.9542
Five varieties	377	0.9043	537	0.9466	152	.9663	434	0.9307	214	0.9602	1714	.9477
All varieties	798	.9449	1163	.9514	309	.9620	1192	.9480	815	.9608	4277	.9547

Table (2.32)

Variety	Green		Between Dry paddy and Green straw	
	H	F	H	F
Chapaladi	61	0.6261	266	0.7307
Gaita	61	.5470	84	.6900
Chapali	62	.5761	88	.7399
Akai	15	.5252	99	.5971
Dhepa	77	-	-	-
Five varieties	377	.5941	537	.6939
All varieties	798	.5444	1163	.7071

Table (2.32). Table of Correlation Coefficients between Green paddy and Green Straw.

Varieties	Durgapur		Haluaiphat		Kalmakanda		Halitabari		Sribardi		All Thanas	
	N	r	N	r	N	r	N	r	N	r	N	r
(1)	(2.1)	(2.2)	(3.1)	(3.2)	(4.1)	(4.2)	(5.1)	(5.2)	(6.1)	(6.2)	(7.1)	(7.2)
Chapalmi	61	0.5416	286	0.7099	27	0.7119	144	0.7074	-	-	494	0.6849
Gaita	51	.5742	84	.7436	87	.7387	9	.3890	-	-	378	.6186
Chapali	62	.5152	88	.7488	-	-	154	.3085	82	0.6437	369	.4401
Ashal	15	.4307	99	.5060	58	.2753	103	.3898	-	-	316	.4635
Dhopa	77	-	-	-	-	-	25	.6556	152	.4745	157	.5590
Five varieties	377	.5841	537	.6939	152	.6659	434	.4445	214	.5272	1714	.5761
All varieties	798	.5444	1163	.7071	309	.5189	1192	.3941	815	.6244	4277	.5359



Table (2.33) : Table of Correlation Coefficients between Dry paddy and Dry straw

Variety	Durgapur		Falunghat		Kalmakunda		Inlatabari		Sribardi		All Thams	
	II	F	II	F	II	F	II	F	II	F	II	F
(1)	(2.1)	(2.2)	(3.1)	(3.2)	(4.1)	(4.2)	(5.1)	(5.2)	(6.1)	(6.2)	(7.1)	(7.2)
Chapalmi	61	0.6281	266	0.7307	27	0.6030	144	0.7240	-	-	494	0.7126
Gaitha	91	.6470	84	.6900	67	.6591	8	(.4927)	-	-	378	.6316
Chapali	62	.6761	88	.7399	-	-	154	.2855	82	.0012	369	.4374
Akhal	15	-	99	.6971	58	.2688	103	.4488	-	-	316	.4798
Dhepa	77	-	-	-	-	-	25	.5493	132	.6969	167	.6694
Five varieties	377	.6883	637	.6637	152	.6396	434	.4217	214	.6647	1714	.5682
All varieties	798	.6067	1163	.7048	309	.5982	1192	.3672	816	.6729	4277	.5379

Table (2.34) Table of correlation coefficients between Dry paddy and chitta.

Variety	Durgapur		Falunghat		Kalmakunda		Inlatabari		Sribardi		All Thams	
	II	F	II	F	II	F	II	F	II	F	II	F
(1)	(2.1)	(2.2)	(3.1)	(3.2)	(4.1)	(4.2)	(5.1)	(5.2)	(6.1)	(6.2)	(7.1)	(7.2)
Chapalmi	61	0.3766	266	0.3478	27	0.4875	144	0.4458	-	-	494	0.3816
Gaitha	91	.2485	84	.2652	67	.4714	8	(.6446)	-	-	378	.3090
Chapali	62	.4105	88	.4239	-	-	154	.6030	82	0.5985	369	.4788
Akhal	15	.4969	99	.5661	58	.6171	103	.4279	-	-	316	.4789
Dhepa	77	-	-	-	-	-	25	.4706	132	.4431	167	.4317
Five varieties	377	.3065	637	.3935	152	.5286	434	.4594	214	.6138	1714	.4280
All varieties	798	.3606	1163	.3929	309	.6084	1192	.4268	816	.6046	4277	.4394

Frequency distribution of weight of Green paddy in mds. per acre.  
(Farasali)

Table (3.1)

Class Interval	Durgapur		Halughat		Kalmukunda		Waltabari		Sribardi		All Thanas	
	Half samples	Means	Half samples	Means	Half samples	Means	Half samples	Means	Half samples	Means	Half samples	Means
(1)	(2.2)	(2.3)	(3.2)	(3.3)	(4.2)	(4.3)	(5.2)	(5.3)	(6.2)	(6.3)	(7.2)	(7.3)
0-5	15	1	11	-	8	1	10	1	16	1	60	4
5-10	60	6	76	1	21	4	44	3	58	4	246	18
10-15	98	16	167	8	49	11	103	9	66	17	481	61
15-20	163	29	228	37	66	17	179	15	60	13	686	110
20-25	162	47	222	45	65	27	214	54	58	15	721	188
25-30	151	33	191	36	60	14	238	40	61	10	701	133
30-35	105	8	134	11	31	4	187	30	32	9	489	62
35-40	58	4	73	1	11	3	92	6	19	1	253	12
40-45	12	-	24	1	7	1	43	1	16	-	102	2
45-50	3	-	6	-	1	1	9	-	3	-	22	1
50-55	-	-	-	-	-	-	3	-	-	-	3	-
55-60	-	-	-	-	-	4	1	-	-	-	1	-
Total	815	142	1131	140	309	82	1123	158	387	70	3765	592

Percentage distribution of weight of Green paddy in mds. per acre  
(Farasali)

Class Interval	Durgapur		Halughat		Kalmukunda		Waltabari		Sribardi		All Thanas	
	Half Samp.	Contour	Half Samp.	Contour	Half Samp.	Contour	Half Samp.	Contour	Half Samp.	Contour	Half Samp.	Contour
(1)	(2.2)	(2.3)	(3.2)	(3.3)	(4.2)	(4.3)	(5.2)	(5.3)	(6.2)	(6.3)	(7.2)	(7.3)
0-5	1.84	0.70	1.61	-	2.59	1.22	0.24	0.89	4.13	1.43	1.44	0.39
5-10	6.13	4.22	3.31	0.71	6.80	4.88	3.01	3.92	14.47	5.71	11.02	6.68
10-15	11.78	11.27	13.69	5.71	15.86	13.11	4.40	9.17	17.05	24.28	21.89	10.30
15-20	20.00	20.42	19.78	20.16	26.44	26.44	29.89	15.94	15.50	18.57	23.44	18.58
20-25	19.88	33.11	20.60	19.63	32.83	40.98	19.06	34.18	14.99	21.44	28.66	19.15
25-30	18.63	23.24	33.46	25.71	19.42	17.07	16.86	21.19	23.32	14.28	8.56	31.75
30-35	12.88	6.63	6.25	7.86	6.00	10.03	4.88	3.12	16.86	6.23	3.89	22.47
35-40	7.12	1.41	1.01	6.48	3.66	1.50	3.16	8.19	0.90	1.43	12.99	10.47
40-45	1.47	-	0.29	2.12	0.03	2.27	-	3.83	4.31	1.11	6.72	2.03
45-50	0.87	-	-	0.53	0.32	0.08	0.80	0.63	0.78	-	2.71	0.24
50-55	-	-	-	-	0.27	-	0.27	-	0.78	-	0.68	0.17
55-60	-	-	-	-	0.12	-	0.67	-	-	-	0.08	-
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Table (3.3) : Frequency Distribution of weight of Green Paddy in Mds. per acre. (Dofasali)

Class intervals	Halughat		Kalmounda		Mouza		Malitabari		Sribardi		All Thanas	
	Half samples	Means	Half samples	Means	Half samples	Means	Half samples	Means	Half samples	Means	Half samples	Means
(1)	(5.2)	(5.3)	(4.2)	(4.3)	(5.2)	(5.3)	(6.2)	(6.3)	(6.2)	(6.3)	(7.2)	(7.3)
0 - 5	-	6	1	4	4	1	30	1	34	1	34	1
5 - 10	10	7	2	2	20	7	100	4	131	4	131	17
10 - 15	16	6	3	2	30	12	120	28	158	28	158	49
15 - 20	15	6	3	3	13	7	84	8	115	20	115	35
20 - 25	9	4	2	3	9	4	47	6	67	8	67	19
25 - 30	2	1	2	1	4	2	31	4	39	4	39	8
30 - 35	2	2	-	-	5	1	11	1	16	1	16	4
35 - 40	1	1	-	-	3	1	9	1	13	1	13	3
40 - 45	1	-	-	-	-	-	3	1	4	1	4	1
45 - 50	-	-	-	-	-	-	1	-	1	-	1	-
50 - 55	-	-	-	-	-	-	-	-	-	-	-	-
55 - 60	-	-	-	-	-	-	-	-	-	-	-	-
Total	56	27	10	8	70	85	450	07	578	07	578	137

Table (3.4) : Percentage Distribution of weight of Green Paddy in Mds. per acre. (Dofasali)

0 - 5	-	-	-	-	5.28	2.86	6.88	-	5.88	0.73
5 - 10	17.86	22.22	10.00	-	26.32	20.00	22.94	5.97	22.46	12.41
10 - 15	28.57	25.53	20.00	25.00	26.31	34.28	27.52	41.79	27.34	35.77
15 - 20	26.78	22.23	30.00	25.00	17.10	20.00	19.27	29.86	19.50	26.54
20 - 25	16.07	14.81	20.00	37.50	11.85	11.43	10.78	11.95	11.59	13.87
25 - 30	3.57	3.70	20.00	12.50	5.28	5.71	7.11	5.97	6.75	5.84
30 - 35	3.57	7.41	-	-	3.95	2.86	2.52	1.49	2.77	2.92
35 - 40	1.79	3.70	-	-	3.95	2.86	2.52	1.49	2.25	2.19
40 - 45	1.79	-	-	-	-	-	0.69	1.49	0.69	0.73
45 - 50	-	-	-	-	-	-	0.23	-	0.17	-
50 - 55	-	-	-	-	-	-	-	-	-	-
55 - 60	-	-	-	-	-	-	-	-	-	-
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Table (3.5): Frequency Distribution of weight of green paddy in Hds. per acre  
(All seasons)

Class Intervals	Durgapur		Halughat		Kankardha		Halitabari		Sribardi		All Seasons							
	Cuts	Half samp.	Half samp.	Means	Cuts	Half samp.	Half samp.	Means	Cuts	Half samp.	Cuts	Half samp.						
(1)	(2.1)	(2.2)	(2.3)	(3.1)	(3.2)	(3.3)	(4.1)	(4.2)	(4.3)	(5.1)	(5.2)	(5.3)	(6.1)	(6.2)	(6.3)	(7.1)	(7.2)	(7.3)
0-5	84	15	1	71	11	-	29	8	1	82	14	2	212	46	-	478	94	*
5-10	197	60	6	320	85	4	92	22	3	284	64	3	624	154	4	1517	375	17
10-15	403	96	16	733	183	8	183	51	11	505	124	11	673	184	28	2900	698	74
15-20	576	163	29	920	243	39	224	59	18	705	192	15	563	143	18	2968	800	119
20-25	608	162	47	900	281	44	215	67	28	900	225	55	399	105	31	3022	788	195
25-30	538	151	33	892	193	37	227	62	14	904	242	45	287	92	7	2648	740	136
30-35	392	105	8	481	136	12	113	31	4	686	190	24	168	43	4	1850	505	52
35-40	212	68	2	261	74	1	53	11	3	408	95	4	135	23	3	1047	266	30
40-45	66	12	-	115	25	1	22	7	-	187	43	1	69	19	-	419	106	2
45-50	14	3	-	38	6	-	11	1	1	35	9	-	23	5	-	126	24	1
50-55	-	-	-	-	-	-	-	-	-	9	3	-	-	-	-	9	3	-
55-60	-	-	-	-	-	-	-	-	-	7	1	-	-	-	-	7	1	-
Total	3090	815	142	4531	1187	-	1174	319	84	4070	1270	160	3126	510	85	16591	4340	614

Table (3.6): Percentage Distribution of weight of green paddy in Hds. per acre.  
(All seasons)

Class Intervals	Durgapur		Halughat		Kankardha		Halitabari		Sribardi		All Seasons							
	Cuts	Half samp.	Cuts	Half samp.	Cuts	Half samp.	Cuts	Half samp.	Cuts	Half samp.	Cuts	Half samp.						
(1)	(2.1)	(2.2)	(2.3)	(3.1)	(3.2)	(3.3)	(4.1)	(4.2)	(4.3)	(5.1)	(5.2)	(5.3)	(6.1)	(6.2)	(6.3)	(7.1)	(7.2)	(7.3)
0-5	2.72	1.94	0.70	1.57	0.95	-	2.47	2.51	1.19	1.76	1.17	1.25	6.78	5.62	-	2.88	2.17	0.65
5-10	6.37	6.14	4.22	7.06	7.16	0.70	7.84	6.80	3.67	6.08	5.33	1.88	19.96	16.80	4.71	9.14	8.64	2.77
10-15	13.04	11.78	11.27	15.18	15.42	5.69	16.01	15.98	13.10	10.77	10.83	6.86	21.63	22.47	32.04	16.07	14.70	12.06
15-20	18.64	20.00	20.42	20.08	20.46	27.27	19.08	18.50	21.45	15.10	16.00	9.38	17.69	17.46	21.17	17.90	18.43	19.38
20-25	19.68	19.88	20.11	19.88	19.48	30.78	18.31	21.00	35.33	19.27	18.68	34.37	12.76	12.82	24.70	18.22	18.18	31.77
25-30	17.41	18.52	18.24	16.27	16.28	25.67	19.34	19.44	16.67	19.35	20.18	28.12	9.18	11.23	8.24	15.96	17.06	22.15
30-35	12.69	12.88	6.63	10.84	11.46	8.39	9.63	9.72	4.76	14.69	15.63	18.00	5.38	6.26	4.71	11.15	11.64	8.47
35-40	6.86	7.12	1.41	5.76	6.23	0.70	4.51	3.45	5.67	8.74	7.92	2.50	3.61	3.42	3.63	6.31	6.13	2.12
40-45	2.14	1.87	-	2.64	2.11	0.70	0.87	2.19	-	3.15	3.58	0.62	2.21	2.32	-	2.63	2.44	0.32
45-50	0.46	0.37	-	0.84	0.51	-	0.94	0.31	1.19	0.76	0.26	-	0.90	0.61	-	0.75	0.55	0.16
50-55	-	-	-	-	-	-	-	-	-	0.19	0.26	-	-	-	-	0.05	0.07	-
55-60	-	-	-	-	-	-	-	-	-	1.19	0.08	-	-	-	-	0.04	0.02	0.16
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Table (3.7) P.C. Distribution of Estimated Dry Paddy at interval of 1 md.(normal Year).  
(Bikasali)

Class Intervals	Durga- pur	Halua- ghat	Kalua- kanda	Walita- bari	Sri- bari	All Thana
(1)	(2)	(3)	(4)	(5)	(6)	(7)
0 - 1	0.25	-	0.32	-	0.26	0.11
- 2	0.12	-	0.97	0.27	0.78	0.27
- 3	0.74	0.62	0.65	0.36	2.33	0.74
- 4	0.74	0.53	0.65	0.36	1.55	0.64
- 5	1.23	1.06	0.32	1.16	1.29	1.09
- 6	1.84	1.50	3.24	0.89	4.91	1.89
- 7	1.96	2.48	1.62	1.87	5.63	2.44
- 8	1.96	2.03	2.91	1.51	5.94	2.57
- 9	3.19	3.45	3.56	2.32	2.07	2.92
- 10	3.44	4.42	6.15	2.49	4.65	3.80
- 11	3.19	4.42	3.88	2.58	4.13	3.53
- 12	5.03	5.13	6.47	3.56	6.98	4.94
- 13	4.78	4.95	3.56	4.54	3.36	4.52
- 14	5.52	6.01	4.21	4.19	5.17	5.13
- 15	6.75	6.19	7.78	4.63	2.33	5.58
- 16	4.91	5.75	4.21	4.99	4.65	5.10
- 17	5.77	5.66	5.82	5.08	3.36	5.29
- 18	5.28	4.69	5.50	5.07	3.88	4.91
- 19	6.01	4.60	6.15	5.43	6.65	5.29
- 20	4.05	4.86	7.45	5.97	4.39	5.18
- 21	5.20	5.39	4.53	6.14	4.65	5.44
- 22	4.66	4.07	2.59	4.90	4.39	4.35
- 23	6.01	3.36	4.21	5.34	1.29	4.38
- 24	2.94	3.45	2.91	4.90	3.36	3.72
- 25	2.82	2.83	3.24	4.72	2.32	3.37
- 26	2.82	2.65	1.62	3.74	1.81	2.84
- 27	1.96	2.56	0.97	2.40	0.78	2.07
- 28	2.08	2.03	1.62	2.67	0.78	2.07
- 29	1.84	1.33	-	1.96	1.55	1.54
- 30	1.23	0.86	0.32	1.69	2.58	1.33
- 31	0.74	0.71	0.32	1.33	0.52	0.85
- 32	0.25	0.44	1.29	1.07	1.29	0.74
- 33	-	0.35	0.32	0.44	0.77	0.35
- 34	0.49	0.53	0.32	0.62	1.03	0.58
- 35	0.12	0.09	0.32	0.18	0.26	0.16
- 36	-	0.09	-	0.18	0.26	0.11
- 37	-	0.09	-	0.09	-	0.05
- 42	-	-	-	0.36	-	0.11
<b>Total :</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>

Table (3.8): Frequency Distribution of Estimated dry paddy at intervals of 1 md. (normal year.)

Class Intervals	Durga-pur	Haluaghat	Kalmandanda	Nalita-bari	Sri-bardi	All Thana
(1)	(2)	(3)	(4)	(5)	(6)	(7)
0 - 1	2	-	1	-	1	4
- 2	1	-	3	3	3	10
- 3	6	7	2	4	9	28
- 4	6	6	2	4	6	24
- 5	10	12	1	13	5	41
- 6	15	17	10	10	19	71
- 7	16	28	5	21	22	92
- 8	16	32	9	17	23	97
- 9	26	39	11	26	8	110
- 10	28	50	19	28	18	143
- 11	26	50	12	29	16	133
- 12	41	58	20	40	27	186
- 13	39	55	11	51	13	170
- 14	45	68	13	47	20	193
- 15	55	70	24	52	9	210
- 16	40	65	13	56	18	192
- 17	47	64	18	57	13	199
- 18	43	53	17	57	15	185
- 19	49	52	19	61	18	199
- 20	33	55	23	67	17	195
- 21	43	61	14	69	18	205
- 22	38	46	8	55	17	164
- 23	49	38	13	60	5	155
- 24	24	39	9	55	13	140
- 25	23	32	10	53	9	127
- 26	23	30	5	42	7	107
- 27	16	29	3	27	3	78
- 28	17	23	5	30	3	78
- 29	15	15	-	22	6	58
- 30	10	10	1	19	10	50
- 31	6	8	1	15	2	32
- 32	2	5	4	12	5	28
- 33	-	4	1	5	3	13
- 34	4	6	1	7	4	23
- 35	1	1	1	2	1	6
- 36	-	1	-	2	1	4
- 37	-	1	-	1	-	2
- 42	-	-	-	4	-	4
<b>Total :</b>	<b>815</b>	<b>1131</b>	<b>309</b>	<b>1123</b>	<b>387</b>	<b>3765</b>

Table 3.9 : Frequency Distribution of the Estimated normal yield of dry paddy in mounds per acre.

Class Intervals.	Haluaghat	Kalmakanda	Kalitabari	Saribardi	All Thence
(1)	(2)	(4)	(5)	(6)	(7)
0 - 1	-	-	-	2	2
- 2	-	-	1	6	7
- 3	-	-	1	8	9
- 4	-	-	1	16	19
- 5	5	-	4	25	34
- 6	2	-	7	34	43
- 7	3	-	5	21	29
- 8	2	2	7	34	45
- 9	5	-	7	35	47
- 10	3	1	2	36	42
- 11	4	-	8	29	41
- 12	7	-	5	25	35
- 13	5	-	2	28	35
- 14	3	2	3	21	29
- 15	3	1	4	18	26
- 16	2	-	5	12	19
- 17	4	1	2	18	25
- 18	2	1	1	11	15
- 19	1	-	3	12	16
- 20	1	1	1	5	9
- 21	1	-	1	11	13
- 22	-	1	-	7	8
- 23	1	-	-	3	4
- 24	-	-	3	4	7
- 25	1	-	-	4	5
- 26	-	-	-	-	-
- 27	-	-	-	3	3
- 28	-	-	1	1	2
- 29	-	-	1	2	3
- 30	-	-	1	4	5
- 31	-	-	-	1	1
- 32	1	-	-	1	2
- 33	-	-	-	-	-
- 34	-	-	-	-	-
- 35	-	-	-	1	1
<b>Total:</b>	<b>56</b>	<b>10</b>	<b>76</b>	<b>436</b>	<b>578</b>

(Table 3.10)

Percentage Distribution of the normal yield.

Class Inter- vals	Halun- ghat	Kalma- kanda	Nalita- bari	Sri- bardi	All Thanas
(1)	(2)	(3)	(4)	(5)	(6)
0 - 1	-	-	-	0.46	0.35
- 2	-	-	1.31	1.38	1.21
- 3	-	-	1.31	1.83	1.56
- 4	-	-	1.31	4.13	3.29
- 5	8.93	-	5.26	5.74	5.88
- 6	3.57	-	9.21	7.80	7.44
- 7	5.36	-	6.58	4.82	5.02
- 8	3.57	20.00	9.21	7.11	7.27
- 9	8.93	-	9.21	8.03	8.13
- 10	5.36	10.00	2.63	8.26	7.27
- 11	7.14	-	10.53	6.65	7.09
- 12	12.50	-	6.58	5.28	6.05
- 13	8.93	-	2.63	6.42	6.05
- 14	5.36	20.00	3.95	4.82	5.02
- 15	5.36	10.00	5.26	4.13	4.50
- 16	3.57	-	6.58	2.75	3.29
- 17	7.14	10.00	2.63	4.13	4.32
- 18	3.57	10.00	1.31	2.52	2.59
- 19	1.78	-	3.95	2.75	2.77
- 20	1.78	10.00	1.32	1.38	1.56
- 21	1.78	-	1.32	2.52	2.25
- 22	-	10.00	-	1.61	1.38
- 23	1.79	-	-	0.69	0.69
- 24	-	-	3.95	0.92	1.21
- 25	1.79	-	-	0.92	0.87
- 26	-	-	-	-	-
- 27	-	-	-	0.69	0.52
- 28	-	-	1.32	0.22	0.35
- 29	-	-	1.32	0.46	0.52
- 30	-	-	1.32	0.92	0.86
- 31	-	-	-	0.22	0.17
- 32	1.79	-	-	0.22	0.35
- 33	-	-	-	-	-
- 34	-	-	-	-	-
- 35	-	-	-	0.22	0.17
<b>Total:</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>



Table (3.11)

Class Inter- vals .	Durgam- pur	Halum- ghat	Kulma- kanda	Nalita- bari	Sri- bardi	All Thanas
(1)	(2)	(3)	(4)	(5)	(6)	(7)
0 - 1	2	-	1	-	3	6
- 2	1	-	3	4	9	17
- 3	6	7	2	5	17	37
- 4	6	6	2	5	24	43
- 5	10	17	1	17	29	74
- 6	15	19	10	17	53	114
- 7	16	31	5	26	42	120
- 8	16	34	11	24	54	139
- 9	26	44	11	33	42	156
- 10	28	53	20	31	54	186
- 11	26	54	12	37	44	173
- 12	41	65	20	45	50	221
- 13	39	61	11	53	41	205
- 14	45	71	15	50	40	221
- 15	55	73	25	56	27	236
- 16	40	67	13	61	30	211
- 17	47	68	19	59	31	224
- 18	43	55	18	58	26	200
- 19	49	53	19	64	30	215
- 20	33	56	24	68	23	204
- 21	43	62	14	70	29	218
- 22	38	46	9	55	24	172
- 23	49	39	13	60	8	169
- 24	24	39	9	58	17	147
- 25	23	33	10	53	13	132
- 26	23	30	5	42	7	107
- 27	16	29	3	27	6	61
- 28	17	23	5	31	4	80
- 29	15	15	-	23	8	61
- 30	10	10	1	20	14	55
- 31	6	8	1	15	3	33
- 32	2	5	4	12	6	29
- 33	-	5	1	5	3	14
- 34	4	6	1	7	4	22
- 35	1	1	1	2	3	8
- 36	-	1	-	2	1	4
- 37	-	1	-	1	-	2
- 43	-	-	-	4	-	4
<b>Total:</b>	<b>815</b>	<b>1187</b>	<b>319</b>	<b>1200</b>	<b>819</b>	<b>4340</b>

Table (3.12)

Class Inter- vals	Durga- pur	Halua- ghat	Kalma- kanda	Nalita- bari	Sri- bardi	All Thanas
(1)	(2)	(3)	(4)	(5)	(6)	(7)
0- 1	0.25	-	0.31	-	0.37	0.14
- 2	0.12	-	0.94	0.33	1.10	0.39
- 3	0.74	0.59	0.63	0.42	2.07	0.85
- 4	0.74	0.51	0.63	0.42	2.93	0.99
- 5	1.23	1.43	0.31	1.42	3.54	1.71
- 6	1.84	1.60	3.14	1.42	6.47	2.63
- 7	1.96	2.61	1.57	2.17	5.13	2.76
- 8	1.96	2.86	3.45	2.00	6.59	3.20
- 9	3.19	3.71	3.45	2.75	5.13	3.59
-10	3.44	4.47	6.27	2.58	6.59	4.29
-11	3.19	4.55	3.76	3.08	5.37	3.99
-12	5.03	5.48	6.27	3.75	6.11	5.09
-13	4.78	5.14	3.45	4.42	5.01	4.72
-14	5.52	5.98	4.70	4.17	4.88	5.09
-15	6.75	6.15	7.84	4.36	3.30	5.44
-16	4.91	5.64	4.08	5.08	3.66	4.86
-17	5.77	5.73	5.96	4.92	3.79	5.16
-18	5.28	4.63	5.64	4.83	3.17	4.61
-19	6.02	4.47	5.96	5.33	3.66	4.95
-20	4.05	4.72	7.52	5.07	2.81	4.70
-21	5.28	5.22	4.39	5.83	3.54	5.02
-22	4.66	3.38	2.82	4.58	2.93	3.96
-23	6.01	3.29	4.08	5.00	0.98	3.89
-24	2.94	3.29	2.82	4.83	2.07	3.39
-25	2.82	2.78	3.13	4.42	1.59	3.04
-26	2.82	2.53	1.57	3.50	0.85	2.47
-27	1.96	2.44	0.94	2.25	0.73	1.87
-28	2.08	1.94	1.57	2.58	0.49	1.84
-29	1.84	1.26	-	1.92	0.98	1.41
-30	1.23	0.84	0.31	1.67	1.71	1.27
-31	0.74	0.67	0.31	1.52	0.37	0.76
-32	0.25	0.42	1.25	1.00	0.73	0.67
-33	-	0.42	0.31	0.42	0.37	0.32
-34	0.49	0.51	0.31	0.58	0.49	0.51
-35	0.12	0.08	0.31	0.17	0.37	0.19
-36	-	0.08	-	0.17	0.12	0.09
-37	-	0.08	-	0.08	-	0.05
-42	-	-	-	0.33	-	0.09
<b>Total:</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>